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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/685,136	10/14/2003	Joseph B. Rowlands	BP 3247	4505
34399	7590	03/27/2006	EXAMINER	
GARLICK HARRISON & MARKISON LLP			NGUYEN, TANH Q	
P.O. BOX 160727			ART UNIT	
AUSTIN, TX 78716-0727			PAPER NUMBER	

2182

DATE MAILED: 03/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/685,136

Applicant(s)

ROWLANDS, JOSEPH B.

Examiner

Tanh Q. Nguyen

Art Unit

2182

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. Applicant needs to update the status of the related applications.
2. The abstract of the disclosure is objected to because it exceeds 150 words.
Correction is required. See MPEP § 608.01(b).

Claim Objections

3. Claims 2-4, 7, 11-13, 16 are objected to because of the following informalities:

“first data system” in line 3 of claim 2 should be replaced with “first data processing system”

“first data system” in lines 2-3 of claim 3 should be replaced with “first data processing system”

“cacheable memory space” in line 3 of claim 4 should be replaced with “cacheable coherent memory space”

“first data system” in line 3 of claim 7 should be replaced with “first data processing system”

“first data system” in line 3 of claim 11 should be replaced with “first data processing system”

“first data system” in lines 2-3 of claim 12 should be replaced with “first data processing system”

“cacheable memory space” in line 3 of claim 13 should be replaced with “cacheable coherent memory space”

"first data system" in line 3 of claim 16 should be replaced with "first data processing system".

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

5. Claims 5-9, 14-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 5 recites "said converted data" in line 1, and "said conversion" in line 2.

There is insufficient antecedent basis for the limitations in the claim.

Claim 7 recites, "data written by said bridge comprises a payload memory and a flag memory" in lines 1-2. The examiner submits that data can be stored in a memory and data cannot comprise a memory.

Claim 9 recites, "posted requests cannot bypass posted requests" in line 5. It is not clear what the limitation means.

Claim 14 recites "said converted data" in line 1, and "said conversion" in line 2.

There is insufficient antecedent basis for the limitations in the claim.

Claim 16 recites, "data written by said bridge comprises a payload memory and a flag memory" in lines 1-2. The examiner submits that data can be stored in a memory and data cannot comprise a memory.

Claim 18 recites, "posted requests cannot bypass posted requests" in line 5. It

is not clear what the limitation means.

The rejections that follow are based on the examiner's best interpretation of the claims.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jones et al. (US 6,470,429) in view of Anand (US 6,134,641).

8. As per claim 1, Jones teaches a system for managing data in multiple data processing devices using common data paths [90, FIG. 1], comprising:

a first data processing system [100-106, FIG. 1] comprising a memory [102, 106 - FIG. 1], wherein said memory comprises a cacheable coherent memory space [col. 1, lines 25-27]; and

a second data processing system [110, FIGs. 1-2] communicatively coupled to said first data processing system, said second data processing system comprising at least one bridge [210, FIG. 2], wherein said bridge is operable to perform an uncacheable remote access to uncacheable memory space of said first data processing system.

Jones further teaches the bridge being operable to perform a cacheable remote

access to the cacheable coherent memory space of the first data processing system by bus snooping [col. 6, lines 56-59], and bus snooping impacting computer system performance [col. 2, lines 16-17].

Jones does not teach the bridge performing an uncacheable remote access to the cacheable coherent memory space of the first data processing system.

Anand teaches using uncacheable request to access a cache coherent memory space [col. 5, lines 40-45; col. 9, lines 9-12] in order to avoid bus snooping [col. 9, lines 6-7].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to perform an uncacheable remote access to a cacheable coherent memory space, as is taught by Anand, in order for Jones' system to maintain coherency while avoiding bus snooping which results in improved performance.

9. As per claims 2-9, Jones/Anand above teaches access to a cacheable coherent memory space, hence a data read from and a data write to a cacheable coherent memory space;

Anand teaches the uncacheable access participating in cacheable coherent memory protocol [240, FIG. 2]; conversion of uncacheable address space into cacheable address space to allow an agent to access the cacheable coherent address space of a data processing system [240, FIG. 2];

Jones/Anand above teaches the bridge performing an uncacheable request, hence a producer and the agent receiving data (in a data read), hence a consumer, and therefore a producer-consumer protocol;

Jones/Anand above teaches access to the cacheable coherent memory space, hence data written by the bridge comprising a payload; Anand further teaches a flag for indicating an uncacheable request to a cacheable coherent memory space [col. 6, lines 28-31];

Jones/Anand above teaches access to the cacheable coherent memory space, hence data being written in accordance with a set of predetermined ordering rules - to maintain coherency; furthermore since it was known in the art at the time the invention for predetermined rules in a cache coherent system to comprise

non-posted requests cannot bypass posted requests

responses cannot bypass posted requests

subsequent posted requests cannot bypass existing posted requests

in order to maintain coherency, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the above predetermined rules to maintain coherency.

10. As per claims 10-18, the claims generally correspond to claims 1-9, and are rejected on the same basis.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh Quang Nguyen whose telephone number is (571) 272-4154 and whose e-mail address is tanh.nguyen36@uspto.gov. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Kim Huynh, can be reached on (571) 272-4147. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300 for After Final, Official, and Customer Services, or (571) 273-4154 for Draft to the Examiner (please label "PROPOSED" or "DRAFT").

Effective May 1, 2003 are new mailing address is:

Mail Stop ____
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Alexandria, VA 22313-1450

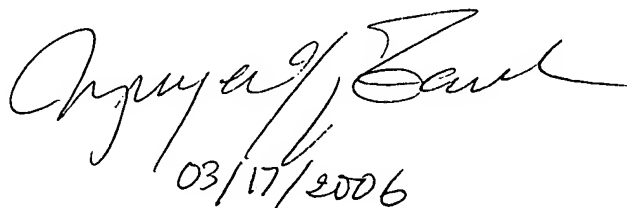
Effective December 1, 2003, hand-carried patent application related incoming correspondences would be to a centralized location.

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TQN

March 17, 2006



03/17/2006